

UNITED STATES PATENT OFFICE.

REUBEN DURRIN, OF CLAY CENTRE, KANSAS, ASSIGNOR TO HIMSELF AND
HARVEY DURRIN, OF SAME PLACE.

PROCESS OF DRAWING ON MARBLE.

SPECIFICATION forming part of Letters Patent No. 386,062, dated July 10, 1888.

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To all whom it may concern:

Be it known that I, REUBEN DURRIN, of Clay Centre, in the county of Clay and State of Kansas, have invented a new and Improved
5 Process of Drawing on Marble, of which the following is a full, clear, and exact description.

In carrying my process into operation I first take a slab of pure white, soft, and porous marble of the desired size and as thin as practical,
10 the thinner the better, as the translucency of the marble allows the light from behind to give a very delicate tint to the portrait when finished, and then finish the surface with fine soft grit or sand-paper, No. 0 or 0 0. If finished with
15 sand-paper, rub by long straight strokes, and rub one way for a few strokes and then rub crosswise. Outline or sketch the picture with a pencil made of common lead hardened by mixing with type-metal to a proper degree of
20 hardness. (Graphite cannot be used.) Trace or sketch the outlines as lightly as possible, so that the lines can be entirely covered. Take a charcoal crayon—say Conte's—and trace carefully all the dark lines of the features, and
25 blend with a camel's hair or sable pencil; or, if very heavy, blend with bristle pencil instead of blending with a cork or chamois stump, as on paper. Now take a soft black preparation known as "crayon-sauce," and make with the
30 hair brush or pencil all dark shades, working from the shadows toward the high lights, and work the whole except the high lights darker than you want the portrait to appear. Now take a piece of cotton-flannel and rub the shadows
35 until smooth, preserving the high lights as much as possible. Then take a small chamois stump, rub it on sand-paper which has been sprinkled with ground pumice-stone, or dip the chamois stump in ground pumice-stone
40 before rubbing on the sand-paper. This gives the chamois stump a rough surface and fills the grain with the grit from the pumice. Now rub the high lights with the same, as well as grind the shadows which are too dark or rough.
45 The pumice will not injure the surface of the marble and can be worked over again with a brush, if necessary.

The deeper shadows can be darkened with a crayon-point, if necessary. The hair and
50 drapery can be made by rubbing on the cray-

on sauce with cloth or chamois-skin, and lightening the necessary parts by grinding with the gritty chamois stump, as described before.

The narrow lines on eyelids, lips, hair, &c.,
55 can be made with a gritty rubber or ink-eraser cut to a fine point, and where the ink-eraser will not remove the color properly take a sharp-edged and pointed steel tool or pen-knife and shave or scrape the marble away. This can be done on all lines on the face, hair,
60 or drapery, and should the picture be too dark in any place sand-paper can be used. The grinding with ground pumice or hard pumice-stone or sand-paper gives the portrait a fine
65 finish, and the delicate shades can be made finer on marble than on any other substance I know of. The background can be made in the same manner and clouded nicely, if desired, with chamois-skin and an ink-eraser.

If a vignette is required, it can easily be
70 made by commencing on the outer edges of the picture and grinding away the paint with pumice-stone, making the background, drapery, &c., lighter on the outer edges, allowing them to remain darker farther in, and grading
75 the picture from dark out to light in every direction from the picture.

I prefer to work the lightest shades and finest tints while the marble is moist. For instance, marble will, in being polished, absorb
80 a certain amount of water and it tints very nicely before it is entirely dry, and if in working it becomes too dry water can be thrown on with an atomizer. The darkest and deepest shades generally work better when the
85 marble is dry.

If the face or any part of the picture appear a little coarse, lay a piece of smooth paper over the picture and rub over the surface with a
90 piece of ivory or some smooth hard material, when all the loose material will adhere to the paper, and the balance is pressed closer to the marble.

Having thus fully described my invention, I claim as new and desire to secure by Letters
95 Patent—

1. The herein-described process of drawing on marble, which consists, essentially, in applying a black substance—such as ivory-black or crayon-sauce—over that portion of the sur- 100

face of a marble slab or sheet where the picture is to be drawn, preserving as much as possible the high lights, and then grinding or cutting away the same until the shadows have the depth, shape, and grade to represent the desired design, substantially as set forth.

2. The herein-described process of drawing on marble, which consists in soaking the thin sheet or slab of marble in water, then applying a black substance—such as crayon sauce or ivory-black—upon the dressed surface where

the picture is to be drawn, preserving as much as possible the high lights, and then grinding or cutting the same away with pumice or other suitable material or article until the shadows have the depth, shape, and grade to represent the desired design, substantially as set forth.

REUBEN DURRIN.

Witnesses:

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